## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**INVENTORS:**    Todd D. Wakefield and David L. Bean

**TITLE:**    Data Products of Processes of Extracting Role Related Information From Free Text Sources

**FILING DATE:**    December 5, 2003    **EXAMINER NAME:** Sathyanaraya R. Pannala

**SERIAL NO.:**    10/729,862    **GROUP ART UNIT:**   2164

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### REMARKS

A terminal disclaimer is attached to overcome the double patenting rejection.

The Examiner rejected the claims under section 101. An amendment has been made to clarify that the invention claimed is a process which is performed on a database located on computer storage media. It is not an abstract mathematical idea, and therefore qualifies for patentability under section 101 of the Patent Act.

The Examiner rejected the claims as being obvious in light of a combination of Lemus and Friedman. The examiner asserts that the combination of Friedman (who teaches parsing for extraction) and Lemus (who teaches extraction to a database) render the invention obvious since it is parsing to extract to a database. But taking a closer look at Friedman reveals that the

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"parsing" taught in that patent is parsing of phrases (complete phrases and sub-phrases). See 4th paragraph in the Detailed Description of Friedman. For example, Friedman explains that, "as a result of phrase parsing, terms in a natural language phrase are classified." Id. As Friedman acknowledges in the same section, such phrase parsing can reveal relationships, but only between the terms comprising the phrase. This is a critical distinction of the invention. The parsing claimed in the invention is of a very different kind – it is clause level and sentence level (and optionally with anaphora resolution, even some discourse level).

This difference in parsing is substantive and shows up in the kinds of extraction results that can be produced. Friedman gives an example in the phrase "spleen was enlarged after going to the movies," and explains that her phrase parsing would yield "spleen was enlarged" or "enlarged spleen" as the only extraction, explaining that "the remaining words are skipped." Thus phrasal parsing extracts the "who" (spleen) and "what" (enlargement) – but omits the "when" (after going to the movies), and would also similarly would omit "where" and "why." Another, perhaps more telling example, would be this sentence: "The bolt underneath the transmission case cracked due to heat." Phrasal parsing of the type disclosed by Friedman would likely extract this phrase: "the transmission case cracked" – which might be categorized or structured as a "transmission case" with the attribute "cracked." However, this would be erroneous. In this sentence, it is not the "transmission case" that has the attribute of being cracked; it is the bolt that is cracked. Transmission case is just a location.

In contrast to the phrase parsing of Friedman, the sentence parsing of the present invention correctly extracts that the bolt was the thing that cracked, the transmission case was the location, and heat was the cause. This is multi-dimensional extraction in which the extraction identifies a thing (bolt) and multiple attributes (action - cracked) (location - transmission) (cause - heat). The present invention's extraction of multiple attributes (or dimensions of data) by sentence parsing is not disclosed or suggested in Friedman. Further, Friedman teaches away from whole sentence parsing and multi-dimensional extraction by teaching that the additional words in a phrase should be skipped.

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These distinctions are clearly revealed in the amended claims. Reconsideration is requested.

Respectfully submitted this 19th day of November, 2006.

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